

Polymer nanocomposite blends

Abstract

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The invention relates to polymer nanocomposite blends of at least two polymers and nanodispersed delaminated phyllosilicates with advantageous properties and methods for their production.

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According to the invention, the polymer nanocomposite blends contain

a) polyamide (PA) from 55 to 95 percent by weight,

b) polypropylene (PP) from 4 to 40 percent by weight,

15 c) nanodisperse phyllosilicates from 1 to 9 percent by weight,

d) up to 10% by wt. carboxylated polyolefins, particularly copolymers of ethylene with unsaturated carboxylic acids,

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so that the weight ratios of the compositions always add always up to 100 percent by weight. Common stabilizers and fillers may optionally be contained as additives.

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The nanocomposite blends are characterized by high rigidity in their freshly molded and conditioned states, reduced water absorption, improved thermooxidative stability, and no decline in strength.

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